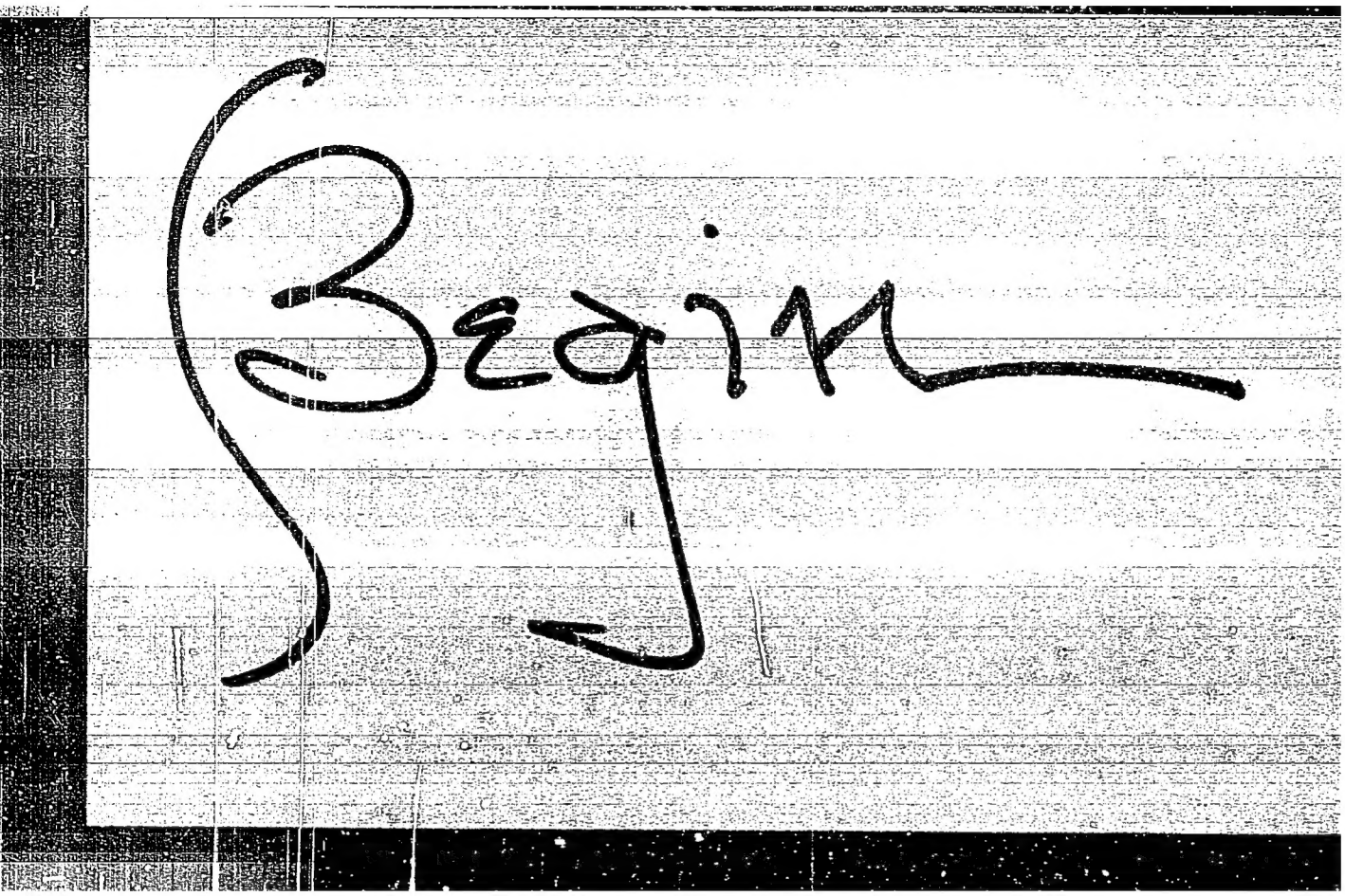

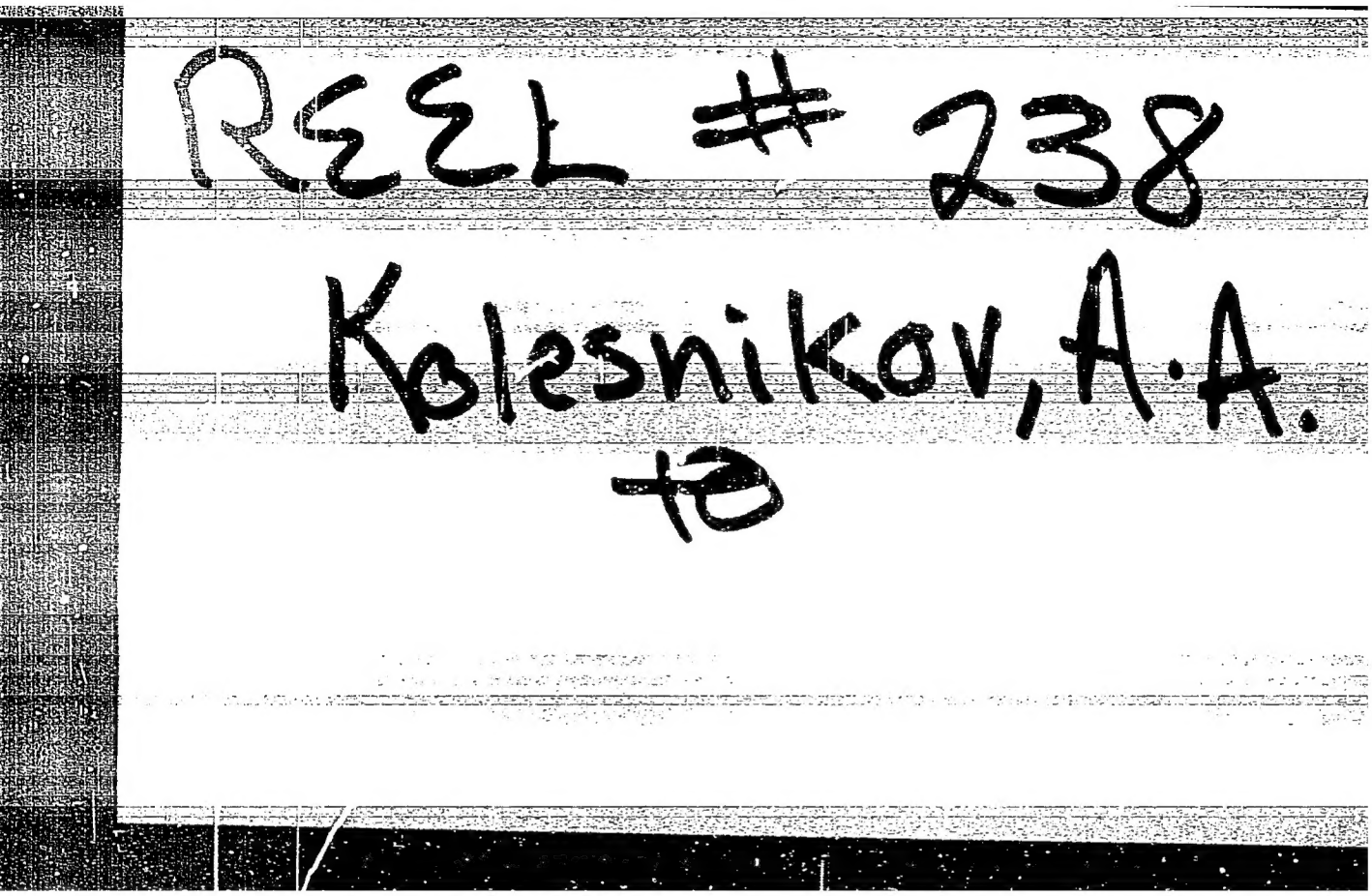

NIKOLAYEV, A.V.; KOLESNIKOV, A.A.; SMIRNOVA, T.P.

Extraction system $La(NO_3)_2 - NH_4NO_3 - H_2O - (C_4H_9O)_3PO$.
Dokl. AN SSSR 159 no.2:379-382 N '64. (MIRA 17:12)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR.
2. Chlen-korrespondent AN SSSR (for Nikolayev).

KOLESNIKOV, A.A.

[Basic theory of jet engines] Osnovy teorii reaktivnykh dvigatelei. Moskva, Voennoe izd-vo Ministerstva vooruzhennykh sil SSSR, 1947. 123 p. [Microfilm]
(Jet propulsion)

(MLRA 7:11)

KRASYUKOV, A.F.; AKIMOV, V.S.; SHEPSHELEVICH, M.I.; SLUTSKAYA, S.M.; KOLESNIKOV, A.A.; MEDBAYLYUK, M.S.

Delayed coking of heavy petroleum residues. Trudy BashNII NP no.1:63-79 '59. (MIRA 12:6)
(Petroleum coke)

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"Experiences of Operating Tunnel and Block Cable Layers of a Metallurgical Combine," "Operation of Cable Networks" (Eksploatatsiya kabeley i kabel'nykh setey), Gosenergoizdat, 1949, 384 pp.

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Extermination of ticks Ixodes persulcatus P.Sch. in natural nidi of tick-borne incephalitis; preliminary report. Med.paraz.i paraz.bol. no.4:331-337 Jl-Ag '53. (MLRA 6:9)
(Ticks)

NIKOLAYEV, A.V.; KOLESNIKOV, A.A.

Use of the extraction ray for the quantitative characteristics of the extraction process. Dokl. AN SSSR 163 no.3:681-683 Jl '65. (MIRA 18:7)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR.
2. Chlen-korrespondent AN SSSR (for Nikolayev).

NIKOLAYEV, A.V.; KOLESNIKOV, A.A.

$La(NO_3)_3 - HNO_3 - H_2O - (C_4H_9O)_3PO$ extraction system at 25°. Dokl. AN SSSR 154 no.6:1395-1397 F '64. (MIRA 17:2)

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S/200/62/000/010/001/002
D204/D307

AUTHORS: Nikolayev, A.V. and Kolesnikov, A.A.

TITLE: The extraction system HNO_3-NH_4NO_3-H_2O-$(C_4H_9O)_3PO$ at 25°C

PERIODICAL: Akademiya nauk SSSR. Sibirskoye otdeleniye. Izvestiya, no. 10, 1962, 80-86

TEXT: The present work is concerned with the effect of NH_4NO_3 on the extraction of HNO_3 from aqueous solutions with TBP. The densities of both phases and the distribution coefficients (K_d) of HNO_3 between water and TBP were measured, in the presence of various amounts of NH_4NO_3. The results are tabulated and the data are plotted by the method described earlier (Zhurn. neorgan. khim., 3, 1037 (1958)). This diagram is discussed, showing that maximum extraction (K_d > 10) is found for highest $[NH_4NO_3]$ and lowest $[HNO_3]$ in the aqueous phase: K_d decreases with increasing $[HNO_3]$. For extractions with water-free TBP the compound entering the organ-

Card 1/2

The extraction system ...

S/200/62/000/010/001/002
D204/D307

ic phase corresponds to $HNO_3 \cdot 0.26H_2O$. Consideration of the variation of K_d with $[NH_4NO_3]$ showed that for 2-5% HNO_3 K_d increased rapidly with $[NH_4NO_3]$, while for 50-60% HNO_3 $K_d \not\propto [NH_4NO_3]$. Plots of K_d against $[HNO_3]$ showed that K_d decreased rapidly as $[HNO_3]$ rose from 0 to 15%, and decreased markedly with decreasing $[NH_4NO_3]$ (0-50%) in this region. At 50-60% HNO_3, however K_d was independent of $[HNO_3]$ and varied little with $[NH_4NO_3]$. It is concluded that for up to 25% NH_4NO_3 the main extracted component is water (for low HNO_3). Above 25% NH_4NO_3, and for very low % HNO_3, K_d may be very high and independent of $[NH_4NO_3]$. Density measurements indicated that HNO_3 determines the density of the organic phases. There are 5 figures and 2 tables.

ASSOCIATION: Institut neorganicheskoy khimii sibirsokogo otdeleniya AN SSSR, Novosibirsk (Institute of Inorganic Chemistry, Siberian Branch of the AS USSR, Novosibirsk)

SUBMITTED: June 18, 1962

Card 2/2

ACCESSION NR: AP4036555 S/0139/64/000/002/0023/0027

AUTHOR: Kolesnikov, A. A.; Uritskiy, Z. I.

TITLE: Possible generation of negative temperature in a doped semiconductor under pulsed excitation

SOURCE: IVUZ. Fizika, no. 2, 1964, 23-27

TOPIC TAGS: semiconductor, semiconductor laser, negative temperature, semiconductor excitation, pulsed excitation

ABSTRACT: The study described developed from previous research by the authors (A. A. Kolesnikov, Z. I. Uritskiy. Izv. vuzov SSSR, Fizika, No. 2, 171, 1964). In the present investigation, the semiconductor is excited by pulses of light with wavelength greater than the width of the forbidden zone into which the impurity center yields two acceptor levels. The pulse duration τ_1 and the interval between pulses τ_2 must be such as to allow for the population inversion between levels in a semiconductor during τ_2. The states with negative temperature correspond to an instant when the pulse is switched off and the population of the upper level exceeds that of the lower. The computed or experimental values of the kinetic transition factor

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ACCESSION NR: AP4036555

and the probability of elementary radiative transition can be used to derive the necessary length and height of a pulse and the duration between pulses for which a state with negative temperature between the impurity levels is generated. Orig. art. has: 9 formulas.

ASSOCIATION: Gosudarstvenny*y opticheskiy institut im. S. I. Vavilova (State Optical Institute)

SUBMITTED: 24Dec62 ATD PRESS: 3045 ENCL: 00

SUB CODE: EC NO REF SOV: 003 OTHER: 000

Card 2/2